

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:  
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## PCT

### NOTIFICATION OF TRANSMITTAL OF INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Rule 71.1)

Date of Mailing  
(day/month/year)

**29 AUG 2003**

Applicant's or agent's file reference  AMAT3083P6PE- P2 . 07	<b>IMPORTANT NOTIFICATION</b>	
International application No.  PCT/US01/42470	International filing date (day/month/year)  05 October 2001 (05.10.2001)	Priority date (day/month/year)  06 October 2000 (06.10.2000)
Applicant		
APPLIED MATERIALS, INC.		

1. The applicant is hereby notified that this International Preliminary Examining Authority transmits herewith the international preliminary examination report and its annexes, if any, established on the international application.
2. A copy of the report and its annexes, if any, is being transmitted to the International Bureau for communication to all the elected Offices.
3. Where required by any of the elected Offices, the International Bureau will prepare an English translation of the report (but not of any annexes) and will transmit such translation to those Offices.
4. **REMINDER**

The applicant must enter the national phase before each elected Office by performing certain acts (filing translations and paying national fees) within 30 months from the priority date (or later in some Offices)(Article 39(1))(see also the reminder sent by the International Bureau with Form PCT/IB/301).

Where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report. It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned.

For further details on the applicable time limits and requirements of the elected Offices, see Volume II of the PCT Applicant's Guide.

Name and mailing address of the IPEA/US  Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450  Facsimile No. (703) 305-3230	Authorized officer  Zandra V. Smith  Telephone No. (703) 305-0530
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# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL PRELIMINARY EXAMINATION REPORT (PCT Article 36 and Rule 70)

Applicant's or agent's file reference  AMAT3083P6PC	<b>FOR FURTHER ACTION</b>		See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)
International application No.  PCT/US01/42470	International filing date (day/month/year)  05 October 2001 (05.10.2001)	Priority date (day/month/year)  06 October 2000 (06.10.2000)	
International Patent Classification (IPC) or national classification and IPC  IPC(7): G01N 21/00 and US Cl.: 356/237.1-237.5			
Applicant  APPLIED MATERIALS, INC.			

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 5 sheets, including this cover sheet.

This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of    sheets.

3. This report contains indications relating to the following items:

- I  Basis of the report
- II  Priority
- III  Non-establishment of report with regard to novelty, inventive step and industrial applicability
- IV  Lack of unity of invention
- V  Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI  Certain documents cited
- VII  Certain defects in the international application
- VIII  Certain observations on the international application

Date of submission of the demand  26 April 2002 (26.04.2002)	Date of completion of this report  01 May 2003 (01.05.2003)
Name and mailing address of the IPEA/US  Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer  Zandra V. Smith Telephone No. (703) 305-0530

## INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/US01/42470

## I. Basis of the report

## 1. With regard to the elements of the international application:\*

 the international application as originally filed. the description:

pages 1-53 as originally filed

pages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_. the claims:

pages 54-59, as originally filed

pages NONE, as amended (together with any statement) under Article 19pages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_. the drawings:

pages 1-41, as originally filed

pages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_. the sequence listing part of the description:pages NONE, as originally filedpages NONE, filed with the demandpages NONE, filed with the letter of \_\_\_\_\_.

## 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

 the language of a translation furnished for the purposes of international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

## 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

 contained in the international application in printed form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.4.  The amendments have resulted in the cancellation of: the description, pages NONE the claims, Nos. NONE the drawings, sheets/fig NONE5.  This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
PCT/US01/42470

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

## 1. STATEMENT

Novelty (N) Claims 3,7-9,11,12,19,22,24-27,29-33,39,40 YES  
Claims 1,2,4-6,10,13-18,20,21,23,28,34-36,37,38 NO

Inventive Step (IS)      Claims 3,7-9,11,12,19,22,24,25,29-33,39,40      YES  
                            Claims 1,2,4-6,10,13-18,20,21,23,26-28,34-36,37,38      NO

## 2. CITATIONS AND EXPLANATIONS

Please See Continuation Sheet

**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

**V. 2. Citations and Explanations:**

Claims 1-2, 4-6, 10, 13-18, 20-21, 23, 28, and 34-38 lack novelty under PCT Article 33(2) as being anticipated by Ban et al. (6,013,966).

As to claims 1 and 10, Ban discloses a precision polishing apparatus with detecting means, comprising: illuminating a portion of the surface of a substrate with light; receiving, at a detector, a portion of the light reflected from the surface (col. 8, lines 20-35); generating, at a processing unit, signal signature information; determining a mean value and a difference in mean values; and determining topographical condition information of the surface (col. 14, line 60 - col. 15, line 15). Ban differs from the claimed invention in that subtraction of the mean values is not specifically disclosed, however since a difference is determined, the limitation is inherently met.

As to claims 2 and 13, Ban discloses everything claimed, as applied above, in addition the steps are performed in a controller that controls and processes the data, therefore, a computer readable program is inherently met (col. 8, lines 25-30).

As to claims 4, 15, 17, and 23, Ban discloses everything claimed, as applied above, in addition a reflected light signal is received (col. 14, lines 65-68).

As to claims 5-6, 14 and 37, Ban discloses everything claimed, as applied above, in addition an unacceptable topographical condition is determined based on reflectivity data and determining a difference between mean value signal information includes comparison to a predetermined value, if the value exceeds the predetermined value a signal indicating an unacceptable topographical condition is produced (col. 14, line 60 - col. 15, line 15).

As to claim 16, Ban discloses everything claimed, as applied above, in addition a light source is provided to illuminate the surface (col. 8, lines 20-25), a detector receives the signals and the processing unit produces signals of sequentially processed substrates (col. 12, lines 20-35; col. 15, lines 1-15).

As to claim 18, Ban discloses everything claimed, as applied above, in addition figure 1 shows a front-end environment.

As to claim 20, Ban discloses a controller programmed to control the operation and processing of the system to perform the claimed steps (col. 6, lines 25-30; col. 14, line 60 - col. 15, line 15).

As to claim 21, Ban discloses everything claimed, as applied above, in addition an output signal is generated if an unacceptable topographical condition is determined (col. 15, lines 1-15).

As to claim 28, Ban discloses everything claimed, as applied above, in addition the data comprises signal signature data (col. 15, lines 1-15).

As to claims 34-36 and 38, Ban discloses everything claimed, as applied above, in addition a mean value is determined (col. 15, lines 1-15), the difference in the mean value indicates the topographical condition of the surface and an unacceptable signal is generated if the difference in the mean value exceeds a predetermined value.

Claims 26-27 lack an inventive step under PCT Article 33(3) as being obvious over Ban et al. (6,012,966). Ban it would have been obvious to one having ordinary skill in the art at the time of invention of a display, however it would have been obvious to one having ordinary skill in the art at the time of invention to provide current surface information to a user.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.  
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**Supplemental Box**

(To be used when the space in any of the preceding boxes is not sufficient)

Claims 3, 7-9, 11-12, 19, 22, 24, 25, 29-33, and 39-40 meet the criteria set out in PCT Article 33(2)-(4), because the prior art does not teach or fairly suggest spectral information, color information of a GUI.

Claims 1-2, 4-6, 10, 13-18, 20-21, 23, 28, and 34-38 meet the criteria for industrial applicability set out in PCT Article 33(4), because the claimed subject matter is useful in the industry.

----- NEW CITATIONS -----

US 6,012,966 A (BAN et al) 11 January 2000 (11.01.2000), see entire document.